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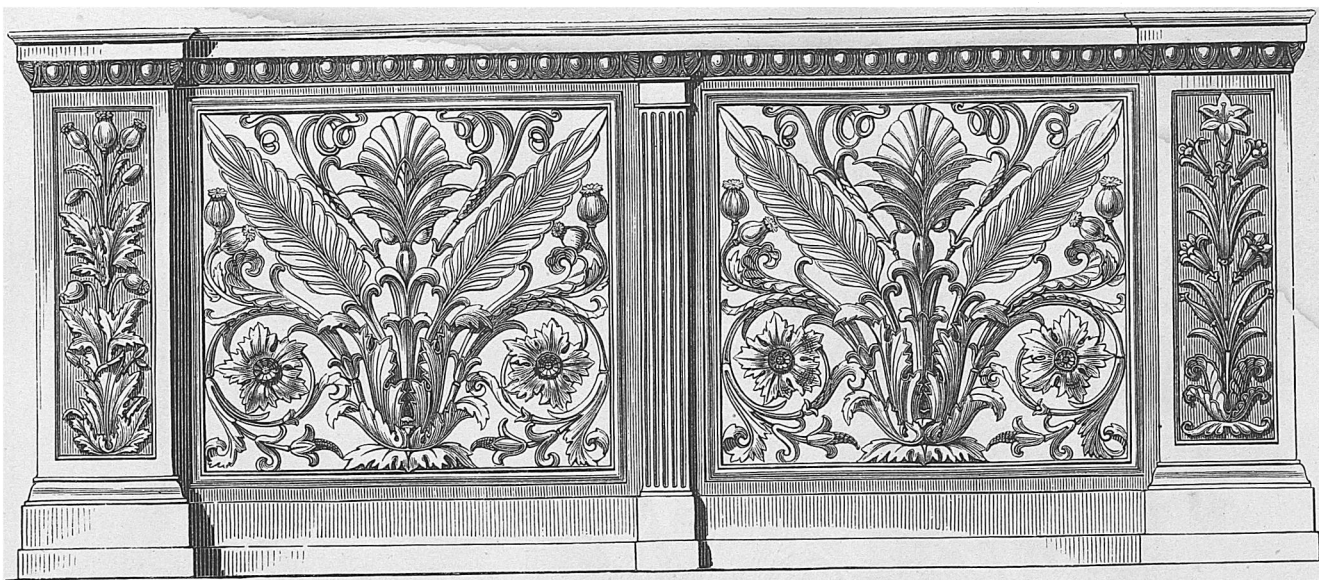
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No. 21. Bronze Tomb-Rails Mr. Hitzig, Archt., Berlin.

VARIOUS.

Waterproofing Walls.

One of the most recent of the many uses to which Mr. Frederick Ransome's process of manufacturing artificial stone has been applied is in protecting the outer walls of buildings, so as to resist the action of the weather by making them waterproof.

Even through well-built and substantial walls moisture will make its way, and the ordinary type of dwelling house is very pervious to wind-driven rain. We recently noticed what Mr. Ransome is doing in preserving stone, and his system of waterproofing is only an application of the same process.

The external surfaces of the walls to be protected are first washed with a silicate of soda or solution of flint, which is applied again and again, until the bricks are saturated, and the silicate ceases to be absorbed. The strength of the solution is regulated by the character of the bricks upon which it is to be applied, a heavier mixture being used upon porous walls, and a lighter one on those of denser texture. After the silicate has become thoroughly absorbed, and none is visible upon the surface, a solution of chloride of calcium is applied, which, immediately combining with the silicate of soda, completely fills up all the interstices in the brick or stone, without in any way altering the original appearance. By this operation the wall is rendered perfectly watertight, and, as the pores of the bricks are thoroughly filled for a considerable depth from the surface with the insoluble compound, which is entirely unaffected by atmospheric influences, no subsequent process is necessary.

Mr. Ransome has already successfully applied this process to a large number of buildings, several of which were previously almost uninhabitable from the constant dampness; and a lengthened experience has proved that it is not only thoroughly effective; but, from the comparative insignificance of its original cost, and the fact that renewals are never required, the system recommends itself for general adoption in preference to all other methods of waterproofing.

Scientific American.

How to preserve Pencil Drawings.

An ingenious means of effecting this has been invented by M. E. Rouget, of Paris. The invention consists in obtaining the fixation of such drawings, tracings, or sketches, by directly projecting on these latter any suitable adhesive liquid reduced to a fine spray, or in what is commonly called the atomized or pulverized state, by causing the liquid to pass rapidly under pressure through one or more capillary tubes or openings. By this method the defects of the transudation process are entirely done away with, besides which the operation is executed in less time, and may be performed at once by the artist without the slightest difficulty. As for the fixation liquid, any colorless, or nearly colorless liquid which allows of being atomized, and which, after becoming dry, causes the particles of the charcoal, or other drawing materials made use of, to adhere sufficiently firmly to the paper or other drawing surface, may serve for the purpose. Thus, for instance, a liquid, which has given the patentee the most satisfactory results, is obtained by adding to a solution of three ounces of white sugar-candy and two ounces of white shellac in about two pints of spirits of wine, a decoction of about one ounce of fucus crispus in one pint of distilled water.

Bronzing Process.

A Bronzing process, applicable to porcelain, stoneware, composition, picture, and looking-glass is performed as follows: The articles are first done over with a thin solution of water-glass by the aid of a soft brush. Bronze powder is then dusted on, and any excess not adherent is knocked off by a few gentle taps. The article is next heated, to dry the silicate, and the bronze becomes firmly attached. Probably in the case of porcelain, biscuit, or stoneware, some chemical union of the silicate will take place, but in other cases the water-glass will only tend to make the bronze powder adhere to the surface. After the heating, the bronze may be polished or burnished with agate tools.

Scientific American.